

**HYMENOPAPPUS CARRIZOANUS (ASTERACEAE-HELENIEAE), A NEW
SPECIES FROM THE CARRIZO SANDS OF CENTRAL TEXAS**

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ABSTRACT

Hymenopappus carrizoanus, a new species from the Carrizo sands of Central Texas, is described and its distribution mapped. It is closely related to both *H. tenuifolius* and *H. artemisiaefolius* and is possibly an ancestral hybrid derivative from between these.

KEY WORDS: *Hymenopappus*, Asteraceae, Texas flora, Carrizo sands.

Preparation of a treatment of the Asteraceae of Texas has brought to the fore a new species of *Hymenopappus*. In my monograph of the latter genus (Turner 1956), I had access to only a few collections of the present taxon, annotating these as "*H. tenuifolius* Pursh, not typical!" Subsequently, I observed several populations of the then undescribed *H. carrizoanus*, but was uneasily content to retain these as but ecotypic variants of the widespread *H. tenuifolius*, the latter occurring in grasslands on calcareous or dry sandy soils from south central Texas to Montana; *H. carrizoanus* mostly occurs in oak forests or oak woodlands in deep loose white sandy soils, referred to in the geological literature as Carrizo sands, a narrow outcrop of lower Tertiary sediments which forms a diagonal band in eastern Texas extending from near Texarkana (rainfall ca 60 inches per year) to just south of San Antonio (rainfall ca 30 inches per year). The distinctive vegetation of the Carrizo sands was the subject of a Ph.D. dissertation by McBryde (1933).

I probably would not have looked closely at the present taxon except for the recent collections of Steve Orzell and Edwin Bridges, research associates of the Plant Resources Center, University of Texas, who have assembled an exceptional array of fine collections of the species, along with an accompanying set of perceptive field notes. Taken together these clearly showed that the species had considerable populational integrity and was not especially close to *H. tenuifolius*. I am grateful to both of these workers for their dedicated zeal and unselfish sharing of their considerable field data.

Hymenopappus carrizoanus B. Turner, *spec. nov.* TYPE: UNITED STATES. Texas: Robertson Co., eolian, unstable, deep xeric sandhill barrens, SW of Mill Creek, ca 1.3 mi S Robertson County Road 333, at a point 3.5 mi W of FM 1940, to W of transmission line r-o-w, Camp Creek Lake 7.5' Quad, 31° 00' 34" N, 96° 21' 34" W, elev. 430-460 ft. Geology-Sparta Sand (Eocene). Soils-Arenosa (Typic Quartzipsamments). Community dominated by *Quercus incana*/*Aristida desmantha*-*Rhododon ciliatus*. 5 May 1988, Steve L. Orzell & Edwin L. Bridges 6583 (HOLOTYPE: TEX!; Isotypes: TEX!, to be distributed).

H. tenuifolio Pursh similis sed caulibus altioribus pariter omnino foliaceis, foliis non nihil sursum deminutis, et involucri tomentulosius differt.

Biennial stiffly erect herbs to 1.5 m high, the stems about equally leafy throughout. Leaves finely bipinnately dissected (the ultimate segments mostly 0.5-1.0 mm wide), at first forming a decided rosette, those at mid stem, 6-12 cm long, gradually reduced upwards. Heads eradiate, numerous in terminal corymbose, ebracteate, panicles, 15-30 cm across, the ultimate peduncles mostly 2-5 cm long. Involucres campanulate, 6-7 mm high, the involucral bracts subequal, broadly obovate with scarious margins apically, the outer faces tomentulose, the vestiture covering atomiferous glands. Receptacles epaleate. Florets 20-40, the corollas white, 3-4 mm long. Achenes narrowly obpyramidal, ca 4 mm long, 1 mm wide, pubescent with spreading hairs 0.4-0.8 mm long, the pappus of ca 20 obovate scales 1.0-1.5 mm long.

ADDITIONAL SPECIMENS EXAMINED: UNITED STATES. Texas: Atascosa Co.: along dirt road from Medina Co., 5.4-5.7 mi E of intersection with Texas Highway 173 (29° 06' 25" N, 98° 46' 52" W), in Carrizo sands, 11 May 1988, Orzell & Bridges 6773 (TEX); 25 mi S of San Antonio (Bexar Co.) along State Highway 16, 3 Jun 1978, Turner 10048 (LL). Bexar Co.: 15 mi S of San Antonio, 4 May 1921, Schulz s.n.; 10.3 mi S of Loop Highway 410 (around San Antonio) along U.S. Highway 183, 19 May 1980, Turner 80-54M (TEX). Caldwell Co.: w/o locality, Spr-Sum, 1931 McBryde s.n. (TEX). Frio Co.: N edge of Frio Co., 8 Apr 1948, Higdon s.n. (TEX); NW side of I-35, 0.4-0.8 mi S of Medina Co. line (29° 03' 12" N, 98° 57' 42" W), 11 May 1988, Orzell & Bridges 6756 (TEX). Guadalupe Co.: along Tidwell Creek, S side of Guadalupe Co. road 442, ca 0.9 mi E of frontage road 1117 (29° 25' 35" N, 97° 49' 36" W), Carrizo sand, 9 May 1988, Orzell & Bridges 6642 (TEX). Leon Co.: Hilltop Lakes, ca 0.2 mi W of Cherokee Lake (31° 04' 27" N, 96° 11' 47", 6 Jun 1989, Orzell & Bridges 10328 (TEX). Medina Co.: 2 mi SW Devine, Carrizo sands, 1 May 1954, Johnston, Tharp & Turner 3426 (TEX).



Fig. 1. Distribution of *Hymenopappus carrizoanus*.

The new species can be distinguished from *H. tenuifolius* by the following couplet:

- Stems about equally leafy throughout, the leaves not much reduced upwards;
 involucre tomentulose throughout; the corolla throat
 funnelform *H. carrizoanus*.
- Stems mostly leafy below, the leaves much reduced upwards; involucre vari-
 ously pubescent to glabrate, not tomentulose throughout; corolla throat
 campanulate *H. tenuifolius*.

Hymenopappus carrizoanus occasionally occurs with *H. artemisiaefolius* DC. var. *artemisiaefolius* and presumably forms hybrids with that taxon. Two such localities are known, as follows: Guadalupe Co., Orzell & Bridges 6645 (locality as cited above for 6643). Caldwell Co., along Caldwell Co. road 151 at crossing of Big Sandy Branch (29° 47' 10" N, 97° 27' 25" W), 12 May 1988, Orzell & Bridges 6825 (TEX).

The putative hybrid from Guadalupe Co. (6645), was found growing with both parents (cf., 6643, 6644 [TEX]). Both parental species and putative hybrids were growing within a 20 meter radius at the locality concerned.

ACKNOWLEDGMENTS

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LITERATURE CITED

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